

Title (en)

Method for injecting a fluid into the exhaust system of a four-stroke internal combustion engine and internal combustion engine for carrying out the method

Title (de)

Verfahren zum Einspritzen einer Flüssigkeit in den Abgastrakt einer Vier-Takt-Brennkraftmaschine und Brennkraftmaschine zur Durchführung des Verfahrens

Title (fr)

Procédé pour injecter un fluide dans le système d'échappement d'un moteur à combustion interne à quatre temps et moteur à combustion interne mettant en oeuvre ce procédé

Publication

EP 1632656 A1 20060308 (DE)

Application

EP 04104228 A 20040902

Priority

EP 04104228 A 20040902

Abstract (en)

Injecting a liquid into the exhaust system of a four-stroke internal combustion engine comprises injecting the liquid through a nozzle at regular intervals corresponding to a crank angle of 720[deg] for each cylinder. An independent claim is also included for a four-stroke internal combustion engine comprising a nozzle for injecting a liquid into the engine's exhaust system and an engine control system that receives a position signal from a crankshaft sensor that serves to control the nozzle so that the nozzle is opened or closed at regular intervals corresponding to a crank angle of 720[deg] for each cylinder.

IPC 8 full level

F01N 3/025 (2006.01); **F01N 3/08** (2006.01); **F01N 3/20** (2006.01); **F01N 13/02** (2010.01); **F02D 41/34** (2006.01)

CPC (source: EP)

F01N 3/0253 (2013.01); **F01N 3/0821** (2013.01); **F01N 3/0842** (2013.01); **F01N 3/0871** (2013.01); **F01N 3/208** (2013.01); **F01N 9/002** (2013.01); **F01N 13/009** (2014.06); **F01N 2250/02** (2013.01); **F01N 2250/12** (2013.01); **F01N 2250/14** (2013.01); **F01N 2430/085** (2013.01); **F01N 2610/02** (2013.01); **F01N 2610/03** (2013.01); **F01N 2610/1453** (2013.01); **F02B 37/00** (2013.01); **F02D 41/009** (2013.01); **Y02T 10/12** (2013.01); **Y02T 10/40** (2013.01)

Citation (search report)

- [A] US 5907950 A 19990601 - ENDERLE CHRISTIAN [DE], et al
- [A] DE 19522165 A1 19951221 - MITSUBISHI MOTORS CORP [JP]
- [A] EP 1174600 A2 20020123 - TOYOTA MOTOR CO LTD [JP]
- [A] US 6209315 B1 20010403 - WEIGL MANFRED [DE]

Cited by

DE102015204505A1; DE102018218521A1; DE102008025550A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 1632656 A1 20060308; **EP 1632656 B1 20071010**; DE 502004005216 D1 20071122

DOCDB simple family (application)

EP 04104228 A 20040902; DE 502004005216 T 20040902